

METHOD AND DEVICE FOR PERFORMING CARD TRANSACTIONS

TECHNICAL FIELD

The invention relates to a method and device for performing a card transaction using the Internet to facilitate processing of the transaction.

BACKGROUND ART

Many transactions, such as sales transactions, involve consumers that use charge cards, credit cards, debit cards and the like. Such transactions may be collectively referred to as card transactions. Typically, merchants must obtain authorization for these transactions and/or transmit information regarding the transactions to another entity, such as a merchant service provider.

A prior method of performing a card transaction involves using a point of service terminal that has proprietary operating system software of a particular merchant service provider installed thereon. The terminal also typically has other proprietary software for performing such functions as fraud evaluations and report printing. The terminal is used to access a proprietary network of the merchant service provider, and to transmit information regarding the transaction to the network in order to obtain authorization for the transaction.

Because this method utilizes proprietary software and a proprietary network, this method involves significant capital costs. In addition, because the software is installed directly on the terminal, any revisions to the software must be downloaded to or otherwise installed on the terminal. Such revisions are therefore time-consuming and costly to perform. Furthermore, installation of some software revisions may be delayed or never accomplished. Consequently, the terminal may not perform all functions required for a particular transaction.

Another prior method of performing a card transaction involves a consumer using a personal computer to access a web site of a particular merchant. The consumer may then purchase items from the web site by entering a credit card number into the web site using a key pad of the personal computer. Because the 5 personal computer is not a dedicated point of service terminal, however, such a method is inefficient for performing transactions at merchant locations.

DISCLOSURE OF INVENTION

The invention overcomes the shortcomings of the prior art by 10 providing a method and device for performing a card transaction using the Internet to facilitate processing of the transaction, wherein the method and device involve a card reader for receiving a transaction card. Because neither a proprietary operating system nor a proprietary network are required, this method is less costly than prior methods that involve such systems and networks.

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Under the invention, a method of performing a card transaction includes accessing a web server using a transaction device, wherein the web server includes commands for processing the transaction; and entering a transaction card into a card reader of the transaction device in order to enter transaction information 20 associated with the card into the web server.

The method may further include entering additional transaction information into the web server using a touch-sensitive screen of the transaction device and/or a keypad of the transaction device.

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Preferably, the method includes displaying information on a display device of the transaction device. Advantageously, the display device may be used to display an advertisement, an electronic coupon or other information downloaded from the web server and/or other site on the Internet. Consequently, the method of the invention provides far greater access to all types of information compared with prior methods.

In addition, the method may include obtaining authorization for the transaction through the web server. Furthermore, because the commands for obtaining such authorization are preferably included in the web server, the commands may be easily updated and/or revised as necessary.

5 Further under the invention, a point of service terminal for performing a card transaction includes a central processing unit having a web browser for accessing a web server on the Internet. The terminal also includes a card reader in communication with the central processing unit for receiving a transaction card and entering transaction information associated with the card into the web server.

10 Preferably, the terminal further includes a data entry device, such as a keypad, in communication with the central processing unit for entering additional transaction information into the web server. The terminal may also include a display device in communication with the central processing unit for displaying information downloaded from the Internet. Advantageously, the display device may include a touch-sensitive screen for entering additional transaction information into the web server.

15 These and other objects, features and advantages of the invention are readily apparent from the following detailed description of the best mode for carrying out the invention when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

20 FIGURE 1 is a schematic diagram of a transaction device for performing a card transaction according to the present invention; and

25 FIGURE 2 is a flow chart illustrating operation of the method of the invention.

BEST MODE FOR CARRYING OUT THE INVENTION

Figure 1 shows a dedicated transaction device or point of service terminal 10 for performing a card transaction according to the present invention. As used herein, the term "card transaction" refers to a transaction, such as a sale transaction, cash-advance transaction, and the like, that involves a charge card, credit card, debit card or other transaction card. The terminal 10 is preferably configured to be used at merchant or retail locations, such as stores, restaurants, lodging facilities, auto rental companies, hospitals, universities, and the like. Furthermore, the terminal 10 is used to transmit information to a financial services institution, such as a merchant service provider (MSP), and to obtain authorization for a transaction or transactions from the MSP as explained below in greater detail. The MSP may be a transaction acquirer or an agent of a transaction acquirer.

The terminal 10 includes a central processing unit or processor 12, and several peripheral devices in communication with the processor 12. For example, the terminal 10 may include one or more data entry devices, such as a card reader 14 and a keypad 16. Furthermore, the terminal 10 preferably includes a display device 18, which may also be configured as a data entry device as explained below in greater detail.

The card reader 14 is preferably configured to read magnetic strip cards as well as smart cards so that the terminal 10 can accommodate all types of charge cards, credit cards, debit cards and the like. The keypad 16 is preferably configured to receive alpha-numeric input, and is provided with an embedded mouse 20.

The display device 18 has a relatively large color screen 22 that is preferably at least 3 inches by 3 inches. Alternatively, the screen 22 may have any suitable size. The screen 22 may also be touch-sensitive so that a consumer, merchant or other operator can provide input to the terminal 10 by touching the screen 22. For example, a consumer may use his finger to select an appropriate response displayed on the screen 22. As another example, the terminal 10 may be

provided with an electronic pen 23, which the consumer may use on the screen 22 to provide his signature.

The terminal 10 is adapted to be connected to the Internet 24 through an Internet Service Provider (ISP), such as AMERICA ON-LINE®, EARTH LINK®, and the like. Furthermore, the terminal 10 is preferably, but not necessarily, configured to transmit and receive data or information using the Transmission Control Protocol/Internet Protocol suite (TCP/IP).

The terminal 10 is also configured to communicate with the World Wide Web in order to access a particular web page on a web host or server of the MSP. Accordingly, the terminal 10 is preferably provided with a web browser such as NETSCAPE NAVIGATOR GOLD®, MICROSOFT INTERNET EXPLORER®, and the like. Alternatively, the web browser may be a program provided by the MSP or other financial services institution.

The web page and web server are preferably, but not necessarily, configured to transmit and receive data or information using TCP/IP. Furthermore, the web page and web server are preferably programmed in HYPERTEXT MARKUP LANGUAGE® (HTML), and include commands for processing transactions initiated through the terminal 10. For example, the web page and/or web server may include commands for transmitting information between the terminal 10 and the web page and/or web server. Preferably the web page and/or web server includes all commands necessary to obtain authorization of transactions initiated through the terminal 10. Advantageously, then, the terminal 10 need not include any proprietary software of the MSP in order to complete transactions. Furthermore, because the terminal 10 accesses the Internet 24 through an ISP, instead of accessing a proprietary network of the MSP, the terminal 10 need only include software necessary to access the Internet.

The MSP also has a central data base or host computer 26 adapted to be connected to the Internet 24 in order to communicate with the web server. The host computer 26 may be used to download information regarding transactions

initiated through the terminal 10 and/or other terminals. The host computer 26 may also be used to update or otherwise revise the transaction commands on the web page and/or web server. Advantageously, such updates and/or revisions need not be downloaded to the terminal 10 or other terminals.

5 Figure 2 is a flow chart illustrating operation of a method for performing a card transaction using the terminal 10. At step 100, a consumer or merchant swipes a transaction card, such as a charge card, credit card, debit card, and the like, across the card reader 14 of the terminal 10 in order to enter an account number and/or other transaction information associated with the card into the terminal 10. Alternatively, the account number may be entered into the terminal 10 using the keypad 16. At step 102, the terminal 10 is connected to the Internet through a particular ISP using a dial-up connection, cable modem, Asymmetric Digital Subscriber Line (ADSL), T1 connection or any other suitable communication path. Next, at step 104, the web browser installed on the terminal 10 is used to automatically, or otherwise, access the web page on the web server of the MSP. Alternatively, the card may be swiped across or otherwise entered into the card reader 14 at any time during the transaction process, such as after the terminal 10 has gained access to the web page.

20 At step 106, the web page and/or web server may then prompt the consumer and/or merchant for additional transaction information, or confirmation of transaction information already transmitted to the web page and/or web server, by displaying suitable requests on the display device 18. For example, the web page and/or web server may request confirmation of a transaction dollar value that was previously entered into the terminal 10 or into a cash register or similar device that is in communication with the terminal 10. The consumer and/or merchant may then enter additional transaction information into the web page and/or web server using the keypad 16, touch-sensitive screen 22 and/or other data entry device, as indicated at step 108.

30 Next, at step 110, the web page and/or web server performs an evaluation of the transaction information to determine whether the transaction is to

be approved. If the transaction is approved, the web page and/or web server may request an electronic signature from the consumer at step 112. The consumer may then provide his signature on the screen 22 using the pen 23, as indicated at step 114. If the transaction is not approved, then a message indicating such status may 5 be transmitted from the web page and/or web server to the terminal 10. Once the signature of the consumer has been obtained, a receipt may be provided to the consumer to complete the transaction, as indicated at step 116.

According to a feature of the invention, the web page and/or web server of the MSP may be configured to transmit additional information to the 10 terminal 10, such as help screens, e-mail, advertisements, and electronic coupons. Such information may be transmitted automatically to the display device 18, or as requested by the consumer or merchant. Because the web page and web server are programmed in HTML, the web page and web server may also be used to quickly link the consumer and/or merchant to related destinations or addresses on the World 15 Wide Web.

While embodiments of the invention have been illustrated and described, it is not intended that these embodiments illustrate and describe all possible forms of the invention. Rather, the words used in the specification are 20 words of description rather than limitation, and it is understood that various changes may be made without departing from the spirit and scope of the invention.